

Client Ref.:TSMC2002-1178
Our ref:0503-9753-US/final/Vincent/Kevin/TKHR

ABSTRACT OF THE DISCLOSURE

A test circuit for identification of locations with low speed performance. A grid of ring oscillator units and switches connect or disconnect the ring oscillator units to
5 or from each other, such that the locations with low speed performance are identified according to frequencies of oscillation signals generated by rows and columns of ring oscillators respectively formed by operating the test circuit in two different modes.